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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,863	01/17/2006	Paul Angers	ROBCA13.001APC	2836
20995 7590 09/21/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER KATAKAM, SUDHAKAR	
			ART UNIT	PAPER NUMBER
			1621	
			NOTIFICATION DATE	DELIVERY MODE
			09/21/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	Application No. 10/523,863	Applicant(s) ANGERS ET AL.	
	Examiner Sudhakar Katakam	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Status of the Application**

1. Receipt of Applicant's Remarks and Arguments filed on 23<sup>rd</sup> July 2007 is acknowledged. Applicants cancelled the claim 12, so the previous rejection based on the 112 2<sup>nd</sup> paragraph has been vacated. However, the arguments for the 103(a) rejection are not found persuasive. In view of addition of new claims the following rejection has been issued.

Claims 13-14 have been added. Claim 12 is cancelled. Claims 1-11, and 13-14 are rejected.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claim recite a method for preparing conjugated linolenic acids using steps (a), (b) and (c), and the claim is further limited by, wherein after step (c) the reaction mixture is subjected to liquid chromatography. But the specification does not appear to provide support for said step method. The instant specification applied either

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liquid chromatography or urea complexation, but not both in the process. This is new matter.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kass et al** (J.Am.Chem.Soc. vol.61, pages 3292-3294, 1939) in view of **Takagi et al** (Lipids vol. 16, pages 546-551, 1981) and **Newey et al** (US 2,596,344).

The instant claims are drawn to a method for preparing conjugated linolenic acids particularly the positional isomers of octadecatrienoic acid. The method comprising blending a mixture of vegetable oils and or fats, recovering conjugated linolenic acids from the reaction mixture and the subjecting it to urea complexation or liquid chromatography. Claims are further limited to subjecting the reaction mixture to urea complexation.

**Kass et al** teaches the preparation of pseudo-eleostearic acid (a conjugated linolenic acid), viz., 10,12,14-octadecatrienoic acid by treating linseed oil fatty acids with a base (potassium hydroxide), in a polyol solvent (ethylene glycol) [see Experimental section in page 3293].

The difference between the instant invention and **Kass et al** is that the instant application is subjected the reaction mixture to urea complexation and/or liquid chromatography, whereas **Kass et al** is silent on these methods in purifying the product. However **Takagi et al** and **Newey et al** cure these deficiency.

**Takagi et al** teach a method to obtain a detailed composition of the fatty acids in oils containing more than one conjugated octadecatrienoic acid by liquid chromatography techniques [see Abstract and page 547].

**Newey et al**, newly cited, teach a fractionation process in which urea complexation is applied to separate the mixtures of fatty acids [see col.1 and 2].

Preparation of conjugated linolenic acids and their analogs, and their purification methods are known in the art. Conjugated unsaturated fatty acids have greater demand in manufacture of varnishes, drying oils, and their food compositions in treating various diseases. **Kass et al** teach preparation of linolenic acid, viz., 10,12,14-octadecatrienoic acid. However, the position of double bonds in the linolenic acids of instant application is different from that of **Kass et al**. So, these are the isomers, i.e., positional isomers. Please note that the extraction process for one isomer reasonably applicable to the other isomer of the same compound. **Takagi et al** teach separation methods for the linolenic acids, for example, octadecatrienoic acids, from a mixture of an

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octadecatrienoates using liquid chromatography. **Newey et al** teach a fractionation process in which urea complexation is applied to separate the mixtures of fatty acids. So, **Kass et al**, **Takagi et al** and **Newly et al** teachings read the claims 1-11, 13, and 14 of instant application.

Therefore, in view of explicit teachings of **Kass et al**, **Takagi et al** and **Newey et al**, the examiner purports that it would have been obvious to a person of ordinary skill in the art, at the time of invention was made, to apply the purification methods taught by **Takagi et al** and **Newey et al**, to prepare linolenic acids of **Kass et al**, in order to make the reaction process more cost effective and to achieve good yields, with a reasonable expectation of success.

Some limitations of the dependent claims may not be expressly disclosed in references. However, these limitations appear to be drawn to tweaking the process conditions, such as temperature and reaction time range, in the process of preparing conjugated linolenic acids.

Modifying such methodology is prima facie obvious because an ordinary artisan would be motivated to use known purification methods to make the process more efficient or explore economical advantages over the other, since it is within the scope to optimize the conditions through routine experimentation.

### ***Response to Arguments***

7. Applicant's arguments filed on 23<sup>rd</sup> July 2007 have been fully considered but they are not persuasive.

Applicants' argued that there is insufficient basis to establish a prima facie case of obviousness with regard to Kass et al in view of Takagi et al. Applicants argue that Kass et al describe fully conjugated acid compounds that result from rather harsh reaction conditions, involving long reaction times in butanol, a high ratio of KOH/fatty acid and high temperature and also Kass et al's method ends with a standard crystallization step. Takagi et al teach liquid chromatography for analysis of conjugated octadecatrienoic acids, there is no reason why one of ordinary skill in the art would substitute a liquid chromatography method for the crystallization method of Kass et al.

The examiner does not find these arguments persuasive. **Kass et al** clearly suggested to one having ordinary skill in the art the preparation of pseudo-eleostearic acid (a conjugated linolenic acid), viz., 10,12,14-octadecatrienoic acid by treating linseed oil fatty acids with a base (potassium hydroxide), in a polyol solvent (ethylene glycol) [see Experimental section in page 3293]. However, **Takagi et al** teach a method to obtain a detailed composition of the fatty acids in oils containing more than one conjugated octadecatrienoic acid by liquid chromatography techniques [see Abstract and page 547]. **Newey et al**, newly cited, teach a fractionation process in which urea complexation is applied to separate the mixtures of fatty acids [see col.1 and 2].

Therefore, one would be motivated to do this because **Kass et al** teach a method prepare conjugated linolenic acid, and **Takagi et al** and **Newly et al** teach a chromatography and urea complexation techniques to separate the linolenic acids. Please note that applicant's did not claim the harsh reaction conditions and long

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reaction times in the butanol, and high ratio of KOH/fatty acid. Also note that applicants did not claim both urea complexation and liquid chromatography in the claims 1-11.

Preparation of conjugated linolenic acids and their analogs, and their purification methods are known in the art. The extraction process for one isomer reasonably applicable to the other isomer of the same compound. **Takagi et al** separated various conjugated octadecatrienoates using liquid chromatography [see Results and Discussion].

So, in view of the above explicit teachings of the references, the examiner finds that it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made, to combine the teachings of Kass et al and Takagi et al to arrive at applicants' method, with a reasonable expectation of success of making conjugated linolenic acids.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to



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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claim 11 is again provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of copending U.S. Application No.10/567,419.

Applicants' arguments regarding obviousness-type double patenting rejection are also not persuasive for the following reasons.

The instant claims say "comprising" which means they may also have additional components, for example water, in the process or composition. Moreover, "base" is a mixture of base and water. Therefore it is obvious over the copending claims.

With regard to the ratios of the components in the mixture, please note that these ratios are adjustable in the mixture. Therefore, this property is obvious over the copending claims.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


### ***Correspondence***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhakar Katakam whose telephone number is 571-272-9929. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S. Katakam

  
**PETER O'SULLIVAN**  
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